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ABSTRACT

The paper describes pilot work in seven classes with mainstreamed physically handicapped students and four special classes on two measures (Classroom Index of Student Needs and Classroom Index of Individualized Instruction) to describe degrees of student diversity in the classroom and of the individualized educational service provided there. The Classroom Index of Student Needs was formed by combining scores on selected teacher questionnaire items and the sum score on the Permanent Product Information form (an analysis of eight factors, including math and reading achievement test scores, absences, retentions, support services, and outside agencies involved). The Classroom Index of Individualized Instruction was formed by combining teacher questionnaire scores, ratings on the teacher movement observation measure, and ratings on the teacher contact observation measures. Among results were significantly more individualization of instruction and greater student needs in special classes than regular classes. Findings suggested the possibility of using the indexes to measure (1) the number and severity of student needs without identifying individual children as exceptional; and (2) the degree to which the classroom teacher individualizes instruction. (CL)

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April 27, 1979

RESEARCH REPORT

Measures of Student Diversity and Individualized Instruction in Classrooms

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INTRODUCTION: Recent concern over providing services for exceptional children in as non-labeling a manner as possible and in the least restrictive educational environment possible has resulted in the passage of federal legislation guaranteeing the right to appropriate education of all children, including the handicapped. In investigating the degree to which this mandate is met, one would look both for higher degrees of diverse student needs in classrooms (to demonstrate selection of the least restrictive alternative environment) and for higher degrees of individualized instruction (to determine provision of appropriate educational services). Methods of accurately describing different degrees of student diversity in classrooms and of the individualized educational services provided there are critical tools needed for evaluation of mainstreaming programs. Quantitative information of this kind, if reliable and valid, could also be a critical part of an individualized continuing education program for teachers, providing a profile of classroom characteristics for which followup training prescriptions could be devised.

PURPOSE: This paper describes pilot work on two such measures (CLASSROOM INDEX OF STUDENT NEEDS and CLASSROOM INDEX OF INDIVIDUALIZED INSTRUCTION) involving seven regular and four special classes. Results of this pilot study were designed to provide reliability (inter-rater and test retest) and validity (concurrent and construct) estimates on both measures.

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One of the primary aims in developing the instruments was to do so without any need for identifying any individual children as "handicapped" or "exceptional." It was felt that a measure could be devised which would accurately indicate the relative degree of student needs in any classroom without labelling or calling attention to specific students.

The two measures developed are derived from different portions of three data sources:

(1) Observation of the classroom behavior of the teacher and students;
(2) Teacher responses on a questionnaire which asks about their classroom organizational procedures and methods (approximately 2/3 of these items can be corroborated by observers who can ask, "Would you please show me how you do that?", or "May I see that ---?");
(3) Permanent product data already available in school or classroom records (such as student folders or cumulative records, teacher gradebooks, lists of student referrals, etc.).

Data collected were used in one of three capacities (see Table 1): (1) as part of the Classroom Index of Individualized Instruction, (2) as part of the Classroom Index of Student Needs, or (3) as a criterial or dependent measure with which index scores could be compared for relationships. No piece of data was used in more than one of these three ways.

An additional area of data collection and analysis was included, although not necessary for index development, to look at the social interaction of mainstreamed handicapped students with their peers. Table 2 presents those results; they are not further discussed in this paper.

SAMPLE: Seven regular classroom teachers in their first year of mainstreaming physically handicapped students and four teachers of self-contained special education classrooms in a special facility for the developmentally disabled agreed to participate in the study. Each teacher agreed to allow 30 minute observations of the classroom, fill out a teacher questionnaire, and provide access to a class role and cumulative folders. They were informed that no information would identify individual children or teachers by name. Regular classroom teachers taught reading, language arts, or arithmetic in grades one through four, with students ranging in age from six to eleven. Each had one or two identified physically handicapped students during the observed periods. Descriptions of these students are provided in Table 3 . Special classroom teachers' students all had identified handicaps of varying kinds sufficient to warrant their placement in classes in a special program for the developmentally disabled.

PROCEDURE:

1. First drafts were developed of the classroom observation instruments, teacher questionnaire, and permanent product information collection procedures.

2. These first versions were used on a trial basis with an initial sample of five teachers (different from the later study sample described above) and revised as needed. Preliminary inter-rater reliability was established at greater than 80%.

3. Agreement to participate was obtained from the seven regular class teachers, and inter-rater reliability was again established prior to observation.

4. Observers completed classroom observations using a schedule whereby they obtained three thirty-minute samples on each target (handicapped) child with each teacher. (In one case only two observations of a given teacher with a target child were possible because of the child's extended illness.) All observations were scheduled during academic teaching periods, and the three observations were scheduled to cover a two-month period at two-month intervals. Observation procedures are described and froms provided in Appendix A. Inter-rater reliability is reported in Table 4.

5. When all observations were completed, teachers were asked to complete an eight-page teacher questionnaire describing their classroom procedures (described in Appendix B).

6. Observers secured class rolls and obtained from cumulative folders and from support personnel the information requested on the permanent product form (given in Appendix C).

7. Agreement to participate was obtained from the four special class teachers, inter-rater reliability re-established, and steps four, five and six repeated. In addition, these four teachers were asked to fill out the Teacher Questionnaire twice at two-week intervals to determine test-retest reliability (see Table 5).

8. Observation data were reduced to provide the following ratings:

   a. Total class student behavior

      (1) Number of students rated as out of seat (in proportion to ratable intervals)
      (2) Number of students rated as peers talking (in proportion to ratable intervals)
      (3) Number of students rated as off task (in proportion to ratable intervals)

   b. Teacher behavior

      (1) Number of intervals teacher moved from one sixth of the room to another sixth (in proportion to ratable intervals)
      (2) Number of teacher contacts with working students in ratio to contacts with non-working students (in proportion to ratable intervals)

9. Teacher questionnaire responses were scored by content analysis categories (sample of page one given in Appendix D). Previous inter-rater agreement estimates figured as $\frac{A}{A + D} \times 100$ were all above 80. Teachers' responses were given a one to four rating in comparison to pre-established content categories for each of the areas (or items) listed in Appendix B . Inter-rater agreement (all over 80% is reported in Table 6.

10. Permanent product information was used to provide a single score for each classroom by counting "one" for each of the factors listed below and summing overall. Permanent product data were secured by examining the cumulative folders of the class members in order to evaluate the diversity and complexity of student needs. Data on individual students were not targets of this study and information that would in any way "label" individuals was not accumulated. However, in examining the available data accumulated by the system on individual students the data were summed across all categories as follows:

(1) Achievement test scores (reading and math)
A stanine of three or below in each area was counted as one point.

(2) Chronological age
Age one year older than expected age for that grade level was counted as one point.

(3) Absences
More than nine absences in the last complete academic year was counted as one point.

(4) Retentions
Each year the student had been retained or placed in special classes was counted as one point.

(5) Support services
Each special service (resource, social worker, speech, hearing, physical therapy, psychologist, attendance worker, guidance counselor, principal for disciplinary action, etc.) was summed with one point for each service.

(6) Outside agencies involved
One point was given for each system or service listed as being involved with the child (mental health center, crippled children's, after school care center, etc.).

(7) Other problems listed
One point was counted for each major problem area noted (health problems, learning disabled, etc.) from a master listing.

(8) Adaptive equipment needed
One point was tallied for each piece of special equipment listed as needed by child in school setting (lap boards, seat belts, walkers, etc.) or special personnel required (interpreter, classroom aide, etc.).

The summed total of each child's score was tallied and the accumulated special needs of the class provided a quantitative value entered as half of the score on the Classroom Index of Student Needs.

11. The Classroom Index of Student Need (or Diversity) was formed by combining:

a. Scores on selected items of the Teacher Questionnaire, and

b. Sum score on the Permanent Product Information form.

Appendix E summarized CISN components.

The raw scores on each of the two instruments were transformed before summing by dividing each individual's score by the group's mean on that measure. This procedure was necessary to give the two measures equal magnitude in the summed score, since they were both on very different numerical scales (with the maximum Teacher Questionnaire score being 36 and the approximate maximum Permanent Product Score being 20). This transformation procedure was suggested by Ghiselli (1964). The result was a weighted score indicating the relative number of student needs apparent in that classroom, with half the score contributed by a and half by b above.

12. The Classroom Index of Individualized Instruction was formed by combining:

    a. Scores on selected items of the Teacher Questionnaire,

    b. Rating on the Teacher Movement observation measure (teacher changes from one sixth of the room to another), and

    c. Rating on the Teacher Contact observation measure (proportion of teacher contacts with working students to contacts with non-working students).

    Appendix F summarized CIII components.

    Again, raw scores were transformed by dividing each individual's score by the group's mean on that measure to allow each part to make an equal contribution to the summed overall score for this index. A two part score (half from the Teacher Questionnaire items listed in a above and half from the mean of the two observation measures' transformed scores, b and c above) was used to make the contributions of observations and questionnaire more equivalent.

13. Analyses were performed to investigate the relationship of the index scores to other, more established measures (concurrent validity) and to determine whether scores discriminated regular from special classes as one would expect (construct validity). These analyses, along with outcomes, are discussed in the results section following.

RESULTS:

Since this was essentially pilot study work, simple product moment correlation coefficients, t tests and multiple correlation coefficients were computed for these data. Caution must be exercised in the interpretations of these preliminary findings because of the small N and the associated instability of results derived from such small samples.

The first task was to determine if there were significant intercorrelations among the components of the CIII (Teacher Interview/Questionnaire II items, Teacher Classroom Movement, and Teacher Contact with Working/Non-working pupils) and between the components of the CISN (Teacher Interview/Questionnaire SN items and Permanent Product Information). A multiple R of .17 (N.S.) among the components of the CIII was obtained with none of the intercorrelations being larger than r=.16. A product moment correlation coefficient of .31 (N.S.) was obtained between the components of the CISN. Because there were essentially zero order correlations the component variables for both indices (CIII and CISN) were weighted by their respective means (Ghiselli, 1964) and summed as composite scores for further analyses.

Significant differences between regular and special classes were obtained for both CIII ($t = 2.31$, $p < .05$) and CISN ($t = 6.89$, $p < .01$) scores. According to these results, special classes demonstrated significantly more individualization of instruction and greater student needs than did regular classes. These results are presented in Table 7. In addition, permanent product student needs information obtained from cumulative folders of class members showed the expected significant ($F = 94.23$, $p < .01$) differences across regular classes before handicapped students were mainstreamed into them (lowest student needs), regular classes into which handicapped students had been mainstreamed (next student needs), and self-contained special classes (highest student needs). These results are presented in Table 8.

CISN scores were significantly (multiple R = .92, $p < .01$) correlated with out of seat student behavior in the classrooms. This was interpreted to mean the greater the diversity of student needs in the classroom, the more out of seat student behavior.

CIII scores were negatively correlated ($r = -.77$, $p < .01$) with time in classroom transition observation scores. This was interpreted as the greater the degree of individualized instruction occurring in the classroom, the less the amount of time spent by pupils moving from one task to another or between assigned tasks.

Correlations of CIII scores with measures of teacher knowledge and attitudes produced mixed results, due mainly to small N. CIII scores were positively correlated with knowledge factor one (Selective Attention) of the Alternative Classroom Strategies Inventory ($r = .99$, $p < .01$), negatively correlated ($r = -.62$, N.S.) with knowledge factor two (Structuring Contingencies), and positively ($r = .88$ N.S.) with knowledge factor three (Programming). Error factor four (Traditional Authoritarian Control Strategies) correlated $r = 44$ N.S. and error factor five (Well Intentioned Strategies that Are Sure to Backfire) correlated $r = -.87$N.S. with CIII scores. Minnesota Teacher Attitude Inventory factor scores, Teacher Attitude Inventory scores and Rucker-Gable Educational Programming Scale scores produced negligible correlations with CIII scores.

DISCUSSION: These results indicate that it is possible to use the indices as measures of (1) the number and severity of student needs in a given classroom, without identifying individual children as exceptional, and (2) the degree to which the classroom teacher uses individualized instructional procedures in that classroom. Scores derived from the student need measure were able to discriminate between regular classrooms without mainstreamed children, regular classrooms with mainstreamed students, and self-contained special education classrooms. Teacher scores on individualized instruction correlated significantly with other teacher behaviors and measures associated with important aspects of effective instruction. Inter-rater and test-retest reliabilities were high.

Future steps to be taken include:

a. Use of the measures with a larger sample of teachers and classrooms involved. (These data will be used to further establish the reliability and validity of the measures, investigate the need for different scoring keys for different student age groups or developmental levels, and fieldtest the measures' diagnostic training value when used by school personnel responsible for inservice training.)

b. Revision of the Teacher Questionnaire to include those items which best discriminate on the Index of Individualized Instruction, producing a briefer instrument.

c. Refinement of procedures to include the bare minimum of data collection needed for obtaining index scores, excluding all steps required for obtaining dependent measures.

DATA SOURCES

USED IN/AS	Teacher Interview / Questionnaire	Permanent Product Information	Classroom Observation				Teacher Scores*
			Student Group Behavior	Teacher Movement	Teacher Contact	Target Child Proximity	
Classroom Index of Individualized Instruction	(X)			X	(X)		
Classroom Index of Student Need Diversity	(X)	X					
Criterial Variables			X		(X)	X	X

*Alternative Classroom Strategies Inventory
Minnesota Teacher Attitude Inventory
Teacher Attitude Inventory
Rucker-Gable Educational Programming Scale

Table 1

Table 2

Handicapped Child Contact / Proximity * with Peers

	Proportion of Rated Intervals	
	Mean	S D
Self Initiated	.07	.08
Peer Initiated	.15	.17
Teacher Directed	.12	.12
Unknown Initiator	.14	.14
No Contact	.52	.31
Total	1.00	

* within 3 feet

Table 3

DESCRIPTION OF MAINSTREAMED CHILDREN

	I	II	III	IV	V	VI	VII
Medical/ Physical Problems	cerebral palsy	spina bifida, myelomeningocele hydrocephalus scoliosis physical therapy	myelomeningocele shunt ileal loop with bag	spastic quadriplegia physical therapy	heart defects "multiple chromosome breaks"	cerebral palsy physical therapy	myelomeningocele hydrocephalus shunt
Locomotion	wheelchair with lap board	wheelchair with lap board walker (standing table)	braces	Lofstram crutches	(no assistance required)	wheelchair with lap board walker	braces wheelchair (elevated table)
Communication	"meaningful connected speech impossible" electronic communication board language therapy typewriter	speech therapy	(no problem)	(no problem)	speech therapy	typewriter speech therapy	(no problem)
Developmental/ Intellectual Functioning	Pic. Test of Int. Average or above	WISC IQ: verbal 104 perform. 78 fullscale 91	WISC IQ: verbal 84 perform. 75 full scale 78 PPVT IQ: 100	Binet IQ: 92	"severe developmental retardation" WISC IQ: 60 Columbia IQ: 97	WISC IQ: verbal 92 PPVT IQ: 98	Binet IQ: 104 PPVT IQ: 86 Vineland: 90 CTMM: 100
Academic Functioning	CAT Stinines: reading 2 math 3	(not available on entry)	MAT Stanines: reading 6 math 4	CAT Stanines: reading 4	(not available on entry)	MAT Stanines: reading 5 math 3	CAT Stanines: reading 3 math 4
Other	Grade 2 CA 8-5	Grade 1 CA 5-11	Grade 3 CA 10-3	Grade 1 CA 6-9 slight hearing loss	Grade 1 CA 8-10 limited hearing (mild to moderate loss) vision problem: congenital ptosis	Grade 4 CA 9-3 hearing loss	Grade 2 CA 7-7 frequent absences due to surgery problems motivating to work

Table 4

Inter-Rater Reliability

on Classroom Observation Measures:

Per Cent Agreement

	Student Group Behavior	Teacher Movement	Handicapped Child Proximity	Teacher Contact
I	89.3	100.	100.	84.
II	98.	93.3	100.	100.
III	100.	100.	97.5	100.

Table 5

Teacher Interview Questionnaire

Test - Retest Reliability

Teacher	Per cent Agreement
I	87.5
II	80.0
III	75.0
IV	82.5

Table 6

Inter-Rater Reliability

on Teacher Interview / Questionnaire

Content Analyses

Rater	Per cent Agreement with Criterion Rater
A	83.5
B	84.6
C	84.98

Table 7

t - Tests

Variable	Regular Class Mean	S D	Special Class Mean	S D	t
CIII (transformed TIQ + Obs.)	1.79	.27	2.36	.47	2.31*
CISD (transformed TIQ + Perm. Product)	1.27	.16	3.27	.66	6.89**
Time ON TASK	.62	.06	.72	.05	2.47*
Time in TRANSITION	.16	.05	.05	.05	3.02*

* $p < .05$

** $p < .01$

Table 8

Classroom Continuum Difference

in Permanent Product Information Score

	Mean	S D
Regular class before mainstreamed student	1.12*	.58
Regular class with mainstreamed student	1.92*	.78
Self-contained special class	13.79*	2.78

* $F = 94.23$ $(p < .01)$

Appendix A

CLASSROOM OBSERVATION PROCEDURES

I. Equipment required

A. Observation forms
B. Cassette tape player
C. Cassette tape announcing interval number each 10 seconds for 30 minutes

II. Categories of behavior to be observed and tallied

A. Observer one:

1. Off task (child behavior)
2. Peers talking (child behavior)
3. Out of seat (child behavior)
4. Teacher movement (teacher behavior)

B. Observer two:

1. Peer proximity (child behavior)
2. Teacher contact (teacher behavior)

III. Observation sequence for 30 minute observation

A. Observer one:

1. Off task - 5 ten-second intervals per minute for 5 minutes; tally during first and fourth 5 minute blocks of time (total-10 minutes)
2. Peers talking - 5 ten-second intervals per minute for 5 minutes; tally during second and fifth 5 minute blocks of time (total-10 minutes)
3. Out of seat - 5 ten-second intervals per minute for 5 minutes; tally during third and sixth 5 minute blocks of time (total-10 minutes)
4. Teacher movement - final 10 second interval in each minute for 30 minutes

B. Observer two:

1. Peer proximity - 5 ten-second intervals per minute for 30 minutes
2. Teacher contact - final 10 second interval in each minute for 30 minutes

IV. Definition of behaviors to be observed and tallied

A. Observer one

1. Off task--participation in any activity not content related (for example: coloring pictures is an off task activity even though it is done with teacher permission and/or approval)
2. Out of seat--any position other than seat of child engaged w/seat of chair
3. Peers talking--mouth engaged in talking movements--including talking with teacher, peers or self--does <u>not</u> include oral response to teacher question on content.
4. Teacher movement--change in position from one section to another on schematic of classroom

B. Observer two

1. Peer proximity-number of pupils within 3 feet of the handicapped child

child with cause of contact categorized as:

a. S=self-initiated
b. P=peer initiated
c. T=teacher directed
d. U=unknown

2. Teacher contact--teacher speaks with or touches child using the following contact categories:

a. Working, Alone
b. Working, with Peer(s)
c. Hand Raised
d. Asking for Help
e. Not Working, Alone
f. Not Working, w/Peer(s)
g. Other
h. Total Class
i. No Contact

V. Observation procedures

A. Procedures applicable to both observers

1. Identify handicapped child/children before observation begins
2. Observation begins when interval number is announced
3. Begin at left of group to be observed and sweep as rapidly as possible from left to right
4. Tally number of specific category behaviors immediately upon completion of sweep
5. Note changes in number of children observed if children leave or join identified group. If handicapped child leaves group indicate by placing HL in upper right hand corner of interval
6. Use T to designate transition time involving changes in group activity

B. Specific procedures for observer one

1. Prior to observation draw in classroom furniture, doors, windows, etc. on teacher movement schematic. Indicate location of children and identify handicapped child/children by initials HC.
2. Indicate teacher movement by recording minute interval number (1-30) at location of teacher on schematic
3. Circle number recorded on Off Task/Peers Talking/Out of Seat form if handicapped child is engaged in behavior being observed. If more than one target child is involved, put the number in the upper right hand corner of interval.

C. Specific procedures for observer two

1. Indicate number of peers within three feet of the handicapped child using categories describing reason for contact.
2. Indicate type of teacher/pupil contact by recording minute interval number (1-30) by appropriate contact category.
3. Circle interval number if teacher/pupil contact involves handicapped child.

Class: _____ Grade: _____ Rater: _____ Date: _____

Time: _____ to _____ Activity: _____

	1	2	3	4	5	R	1	2	3	4	5	R	1	2	3	4	5	R	1	2	3	4	5	R	1	2	3	4	5	R
off task																														
# in room						1						2						3						4						5
peers talking																														
# in room						6						7						8						9						10
out of seat																														
# in room						11						12						13						14						15
off task																														
# in room						16						17						18						19						20
peers talking																														
# in room						21						22						23						24						25
out of seat																														
# in room						26						27						28						29						30

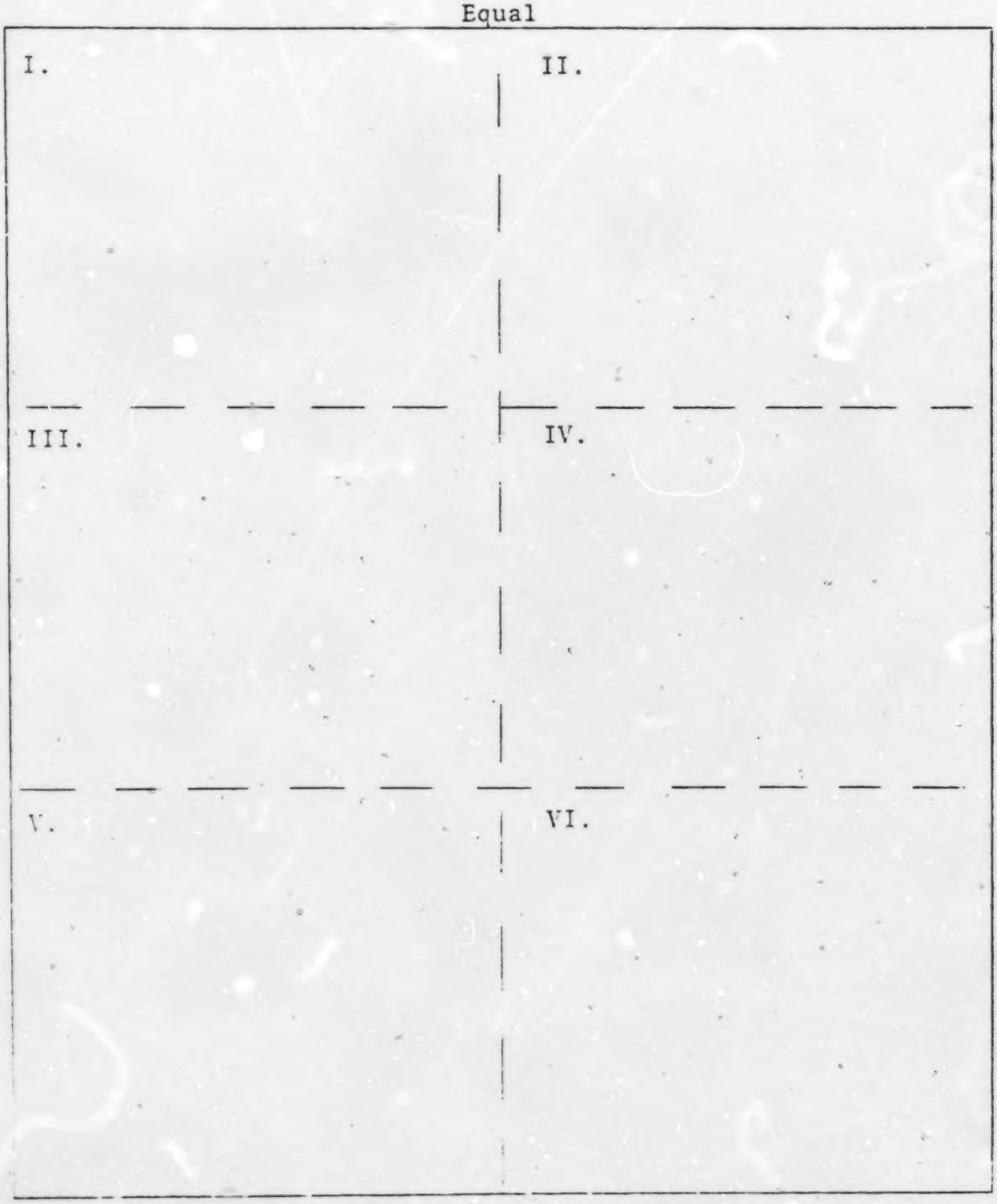
Class: _____ Date: _____

Grade: _____ Time: _____

Rater: _____ Activity: _____

Teacher Movement Observation

Indicate on this page where furniture, doors, and windows are. Then write each interval number in the portion of the room where the teacher is when the recorded interval number is stated.



Class:_____ Date:_____

Grade:_____ Time:_____to_____

Rater:_____ Activity:_____

TEACHER CONTACT OBSERVATION

Tally each time the teacher says something to or touches student(s) when:

_____

Working, Alone

_____

Working, with Peer(s)

_____

Hand Raised

_____

Asking for Help

_____

Not Working, Alone

_____

Not Working, with Peer(s)

_____

Other: (Specify)

_____

Total Class

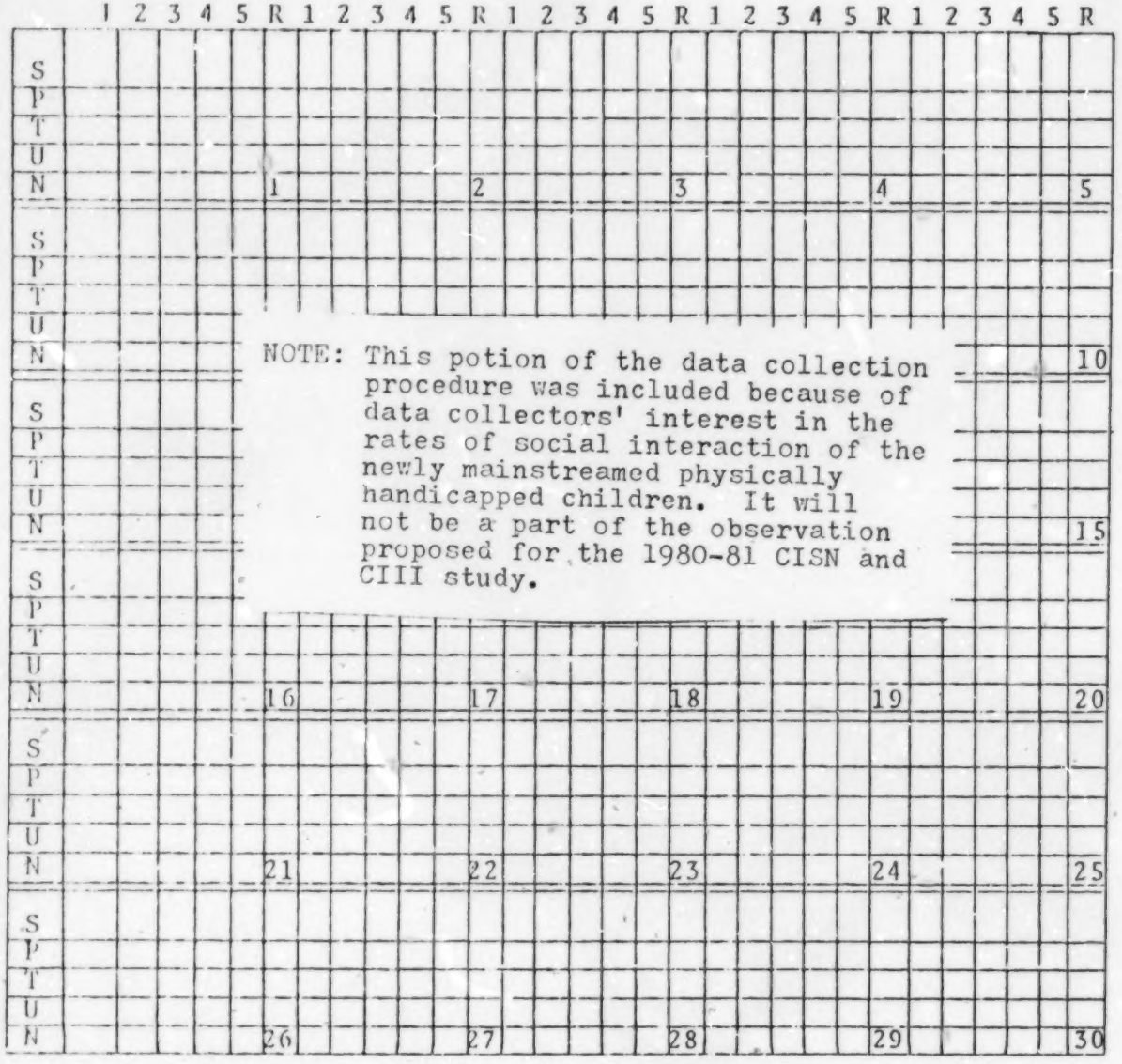
_____

No Contact

_____

Class:_____ Grade:_____ Rater:_____ Date:_____

Time:_____ to _____ Activity:_____


1 2 3 4 5 R 1 2 3 4 5 R 1 2 3 4 5 R 1 2 3 4 5 R 1 2 3 4 5 R
S P T U N
1
2
3
4
5
S P T U N
NOTE: This potion of the data collection procedure was included because of data collectors' interest in the rates of social interaction of the newly mainstreamed physically handicapped children. It will not be a part of the observation proposed for the 1980-81 CISN and CIII study.
10
S P T U N
15
S P T U N
16
17
18
19
20
S P T U N
21
22
23
24
25
S P T U N
26
27
28
29
30

KEY:

S=Self initiated

P=Peer initiated

T=Teacher directed

U=Unknown

N=# of students w/in 3 feet

RECORDING:

X-Indicates first interval when peer moves w/in 3 feet

- Indicates continuation of contact

NOTE:

There may be more than one type contact in any given interval--Record according to cause of contact. Ex.: One contact may be peer initiated and one may be teacher directed

Appendix B

TEACHER QUESTIONNAIRE

Teachers are asked to complete the Teacher Questionnaire without discussion with others, preferably at one sitting. The information requested can be grouped in two major areas: (1) Classroom organization and management procedures, and (2) Identification of children in the classroom with special needs. Starred items (*) refer to answers which can be verified by permanent products available for review. These items can be corroborated by the interviewer's request to see the product ("Can you show me how you do that?" "Could I please see the charts you refer to here?"). Answers are scored by content analysis on a four point rating scale for which categories are defined. Inter-rater agreement in scoring among the four initial scorers was determined to be better than 80%. A score is provided for each of the following areas:

Assessment
Tracking
Grouping
Setting objectives
Skill sequencing
Evaluating progress
Monitoring progress
Managing major disruption
Managing minor problems
Consequating quality work
Consequating quantity work
Materials
Giving assignments

Scoring and recording assignments

Giving feedback

Group meetings

Communication with other adults

Student contact with exceptional peers

Teaching about individual differences

The sum of these scores is used as half of the weighted score for the Classroom Index of Individualized Instruction. Other questions are scored in the same manner and included in the Classroom Index of Student Needs. These include:

Identified students with problems

Physical facility changes

Scheduling changes

Curricular changes

Students with possible problems

Reasons for concern

Action taken

Other students referred

Students receiving services

The sum for these items is used as half of the weighted score for the student needs index.

TEACHER INTERVIEW/QUESTIONNAIRE

(Page 1 - sample)

Teacher #_____
School #_____
Observer_____
Date_____
Time_____

We are trying to discover what kinds of things teachers actually do to try to individualize instruction as much as they find possible in their classrooms. We also want to determine how wide the range of student differences and needs are in most classrooms.

Please answer these questions as accurately as you can. We are interested in what things teachers actually find it possible to accomplish during the school day, so do not feel badly if you can think of other things you could do but aren't doing. All of this information will be coded without names, and all results will be kept confidential. Neither your names nor the names of your students will be recorded or reported; only the data collectors will be aware of your identity and they will not share the information with others without your express permission.

1. At the beginning of the school year, how do you find out what each child needs to work on?

2. How do you keep track of what the children need to work on?

3. For what subject areas do you keep track of this kind of skill information?

4. How do you use this information when you start planning the children's work?

5. Do you group your students? Yes_____ No_____

   If yes,:

   a. In what subjects?

   b. Into how many groups for each subject?

   c. How many are in the smallest group?

   d. How many are in the largest group?

Appendix C

PERMANENT PRODUCT INFORMATION

Permanent product data will be secured by the support teachers in the following way. Rosters of students in each teacher's target class will be secured and the cumulative folders will be examined in order to evaluate the diversity and complexity of student needs represented. Data on individual students is not a goal of this study and once the data are gathered, all identifying information will be deleted and the individual classroom needs assessed will be reported only as totals. Cumulative folder data needed will include:

(1) achievement test scores
(2) birthdates
(3) absences
(4) retentions
(5) in-school and system support services, such as social worker, speech, hearing, physical therapist, resource, psychologist, principal disciplinary actions
(6) outside agencies involved
(7) other problem areas noted in folders
(8) special equipment listed as needed in folder or IEP

The form on which these data are recorded follows.

Class: _____

Child Code #	Achievement Most Recent Score* in Reading	Math	C.A.@ or Birthdate	Annual School Absences+	School Year of Any Retentions	Referrals or Support Services** Res.	Psy.	Read.	Motor	Speech	P.T.	Princ.	Soc.W.	Other	Problems Noted in Files	Outside Agencies Involved	Adaptive Equipment Required C

*Use stanines if given

@On Sept. 1 of school year

+Most recent full school year

**Currently referred to or receiving:
- Resource room
- Psychological services
- Reading support
- Perceptual/Motor
- Speech/Language
- Physical therapy
- Principal (discipline)
- Social worker
- Any other

CInclude any special aid (or aides) required for his classroom participation

TEACHER INTERVIEW/QUESTIONNAIRE

SCORING KEY
CONTENT CATEGORIES

Teacher #_____
School #_____
Observer_____
Date_____
Time_____

We are trying to discover what kinds of things teachers actually do to try to individualize instruction as much as they find possible in their classrooms. We also want to determine how wide the range of student differences and needs are in most classrooms.

Please answer these questions as accurately as you can. We are interested in what things teachers actually find it possible to accomplish during the school day, so do not feel badly if you can think of other things you could do but aren't doing. All of this information will be coded without names, and all results will be kept confidential. Neither your names nor the names of your students will be recorded or reported; only the data collectors will be aware of your identity and they will not share the information with others without your express permission.

1. At the beginning of the school year, how do you find out what each child needs to work on?

   4 = Testing which gives individual diagnostic information
   3 = Group testing with some individual information
   2 = Records from year before
   1 = Teacher observation or communication with past teachers

2. How do you keep track of what the children need to work on?

   4 = Each child's achieved skills recorded in skill sequence
   3 = Skills of students recorded by group
   2 = Checked work or grades
   1 = Observation

3. For what subject areas do you keep track of this kind of skill information?

   4 = All those subject areas taught
   3 = Half or more of those taught
   2 = Less than half of those taught
   1 = None

   (NOTE: Omit this item if teacher teaches only 1 or 2 subjects.)

4. How do you use this information when you start planning the children's work?

   OMIT

5. Do you group your students? Yes_____ No_____

   If yes,:

   a. In what subjects? OMIT

   b. Into how many groups for each subject?

      4 = As many groups as individual students
      3 = More than 1/4 as many groups as students
      2 = More than 1/8 as many groups as students
      1 = Less than 1/8 as many groups as students

   c. How many are in the smallest group?

   d. How many are in the largest group?

      For (c) & (d):
      4 = 1 student
      3 = 2 or 3 students
      2 = 4 to 6 students
      1 = More than 6 students

Appendix E

CLASSROOM INDEX OF STUDENT NEEDS (OR DIVERSITY)

Teacher Interview / Questionnaire

- Identified Students with Problems
- Physical Facility Changes
- Scheduling Changes
- Curricular Changes
- Students with Possible Problems
- Reasons
- Action
- Other Students Referred
- Students Receiving Services

Permanent Product Information Form

- Low Achievement
- Chronological Age
- Absences
- Retentions
- Referrals / Services
- Problems Noted
- Outside Agencies
- Adaptive Equipment

Appendix F

CLASSROOM INDEX OF INDIVIDUALIZED INSTRUCTION

Teacher Interview / Questionnaire

- Assessment
- Tracking
- Grouping
- Setting Objectives
- Skill Sequencing
- Evaluating Progress
- Monitoring Progress
- Managing Major Disruption
- Managing Minor Behavior Problems
- Consequating Quality Work
- Consequating Quantity Work
- Materials
- Giving Assignments
- Scoring and Recording Assignments
- Giving Feedback
- Group Meetings
- Communication with Other Adults
- Student Contact with Exceptional Peers
- Teaching About Individual Differences

Classroom Observation

- Teacher Movement
- Teacher Contact with Working / Non-working Students